

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

CROSIER et al

Atty. Ref.: 3911-11

Serial No. Unassigned

Group:

Filed: November 5, 2001

Examiner:

For: DEVELOPMENTAL TYROSINE KINASES
AND THEIR LIGANDS

* * * * *

November 5, 2001

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

PRELIMINARY AMENDMENT

Please amend the application as follows:

IN THE CLAIMS

Please substitute the following amended claims for corresponding claims previously presented. A copy of the amended claims showing current revisions is attached.

11. (Amended) An extracellular receptor domain according to claim 6 which is bound or attached to a support.

12. (Amended) A soluble receptor comprising the extracellular receptor domain of a receptor tyrosine kinase according to claim 1 lacking the transmembrane region and catalytic domain of said receptor tyrosine kinase.

34. (Amended) A vector including a DNA molecule as defined in claim 15.

35. A vector including a DNA molecule as defined in claim 21.

36. (Amended) A vector including a DNA molecule as defined in claim 28

37. (Amended) A vector including a DNA molecule as defined in claim 31

38. (Amended) A method of producing a receptor tyrosine kinase comprising the steps of:

- (a) culturing a host cell which has been transformed or transfected with a vector as claimed in claim 33 to express the encoded receptor tyrosine kinase; and
- (b) recovering the expressed receptor tyrosine kinase.

39. (Amended) A method of producing an extracellular receptor domain of a receptor tyrosine kinase comprising the steps of:

(a) culturing a host cell which has been transformed or transfected with a vector as claimed in claim 36 to express the encoded extracellular receptor domain; and

(b) recovering the expressed extracellular receptor domain.

56. (Amended) A ligand according to claim 42 wherein the Ligand stimulates the proliferation, differentiation and/or survival of cells which express a receptor tyrosine kinase as defined above.

57. (Amended) A ligand according to claim 42 wherein the ligand is antagonistic and at least partially blocks or inhibits the function of a receptor tyrosine kinase as defined above through binding to said receptor.

58. (Amended) A method of stimulating the proliferation, differentiation and/or survival of a cell expressing a receptor tyrosine kinase according to claim 1 comprising contacting the cell with a ligand as defined above.

61. (Amended) A method of inhibiting the function of a receptor tyrosine kinase according to claim 1 comprising contacting the receptor with a ligand as

defined above.

64. (Amended) A method of treating a disease, syndrome or condition caused or mediated by an excess of a ligand as claimed in claim 56 comprising the step of contacting said excess of said ligand with an effective amount of a receptor tyrosine kinase as defined above, an extracellular receptor domain as defined above or a soluble receptor as defined above.

65. (Amended) A method of treating a disease, syndrome or condition caused or mediated by an excess of a ligand as defined in claim 57 comprising the step of contacting said excess of said ligand with an effective amount of a receptor tyrosine kinase according to claim 1, an extracellular receptor domain as defined above or a soluble receptor as defined above.

66. (Amended) A method of extracting a ligand as defined in claim 56 from a medium which may contain said ligand comprising the step of contacting said medium with a receptor tyrosine kinase as defined above, an extracellular receptor domain as defined above or a soluble receptor as defined above.

67. (Amended) A method of isolating ligand(s) as defined in claim 56 from a medium which may contain said ligand(s), comprising the steps of:

- (a) contacting said medium with an effective amount of a receptor

tyrosine kinase as defined above, an extracellular domain as defined above or a soluble receptor as defined above;

(b) detecting which ligand(s) bind to said tyrosine kinase receptor,

extracellular receptor domain or soluble receptor; and

(c) isolating such bound ligand(s).

REMARKS

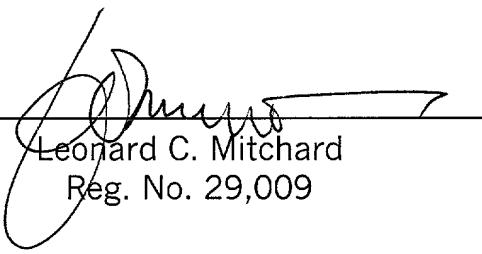
The above amendments have been made to place the application in a more traditional format. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page(s) is captioned

"Version With Markings To Show Changes Made."

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

11. (Amended) An extracellular receptor domain according to [any one of claims 6 to 10] claim 6 which is bound or attached to a support.

12. (Amended) A soluble receptor comprising the extracellular receptor domain of a receptor tyrosine kinase according to [any one of claims 1 to 5] claim 1 lacking the transmembrane region and catalytic domain of said receptor tyrosine kinase.

34. (Amended) A vector including a DNA molecule as defined in [any one of claims 15, 16, 18 and 19] claim 15.

35. A vector including a DNA molecule as defined in [any one of claims 21, 22, 24 and 25] claim 21.

36. (Amended) A vector including a DNA molecule as defined in claim 28 [or claim 29].

37. (Amended) A vector including a DNA molecule as defined in claim

31 [or claim 32].

38. (Amended) A method of producing a receptor tyrosine kinase comprising the steps of:

- (a) culturing a host cell which has been transformed or transfected with a vector as claimed in [any one of claims 33-35] claim 33 to express the encoded receptor tyrosine kinase; and
- (b) recovering the expressed receptor tyrosine kinase.

39. (Amended) A method of producing an extracellular receptor domain of a receptor tyrosine kinase comprising the steps of:

- (a) culturing a host cell which has been transformed or transfected with a vector as claimed in claim 36 [or claim 37] to express the encoded extracellular receptor domain; and
- (b) recovering the expressed extracellular receptor domain.

56. (Amended) A ligand according to [any one of claims 42-55] claim 42 wherein the Ligand stimulates the proliferation, differentiation and/or survival of cells which express a receptor tyrosine kinase [according to claim 1] as defined above.

57. (Amended) A ligand according to [any one of claims 42-55] claim 42

wherein the ligand is antagonistic and at least partially blocks or inhibits the function of a receptor tyrosine kinase [according to claim 1] as defined above through binding to said receptor.

58. (Amended) A method of stimulating the proliferation, differentiation and/or survival of a cell expressing a receptor tyrosine kinase according to claim 1 comprising contacting the cell with a ligand [according to claim 56] as defined above.

61. (Amended) A method of inhibiting the function of a receptor tyrosine kinase according to claim 1 comprising contacting the receptor with a ligand [according to claim 57] as defined above.

64. (Amended) A method of treating a disease, syndrome or condition caused or mediated by an excess of a ligand as claimed in claim 56 comprising the step of contacting said excess of said ligand with an effective amount of a receptor tyrosine kinase [according to any one of claims 1-5 and 40] as defined above, an extracellular receptor domain [according to any one of claims 6-11 and 41] as defined above or a soluble receptor [according to claim 12] as defined above.

65. (Amended) A method of treating a disease, syndrome or condition

caused or mediated by an excess of a ligand as defined in claim 57 comprising the step of contacting said excess of said ligand with an effective amount of a receptor tyrosine kinase according to [any one of claims 1-5 and 40] claim 1, an extracellular receptor domain [according to any one of claims 6-11 and 41] as defined above or a soluble receptor [according to claim 12] as defined above.

66. (Amended) A method of extracting a ligand as defined in claim 56 [or claim 57] from a medium which may contain said ligand comprising the step of contacting said medium with a receptor tyrosine kinase [according to any one of claims 1-5 and 40] as defined above, an extracellular receptor domain [according to any one of claims 6-11 and 41] as defined above or a soluble receptor [according to claim 12] as defined above.

67. (Amended) A method of isolating ligand(s) as defined in claim 56 [or claim 57] from a medium which may contain said ligand(s), comprising the steps of:

- (a) contacting said medium with an effective amount of a receptor tyrosine kinase [according to any one of claims 1-5 and 40] as defined above, an extracellular domain [according to any one of claims 6-11 and 41] as defined above or a soluble receptor [according to claim 12] as defined above;
- (b) detecting which ligand(s) bind to said tyrosine kinase receptor, extracellular receptor domain or soluble receptor; and

(c) isolating such bound ligand(s).